REMARKS

Claims 1-47 are pending, but claims 20, 21 and 25-47 have been withdrawn from consideration.

I. Amendments

Claims 1, 2, 3 and 8 plus a molecular weight range of about 35,000 to about 750,000 daltons were combined to form amended Claim 1. Claims 11, 2, 3 and 8 plus a molecular weight range of about 35000 to about 750,000 daltons were combined to form amended Claim 11. Claim 12 was amended to recite a molecular weight range of about 35,000 to about 750,000 daltons. Claim 2 was amended to recite a molecular weight range of about 35,000 to about 500,000 daltons. Claims 3, 7 and 8 were amended to recite a molecular weight range of about 35,000 to about 300,000 daltons. The molecular weight ranges are supported at page 8 of the specification. Claim 5 was amended to improve readability.

II. 35 USC § 102 or 103

Claims 1-19 and 22-24 are rejected under 35 USC § 102(b) as anticipated by or, in the alternative, under 35 USC § 103(a) as obvious over McCall (US Patent 5,277,899) or Li et al (US Patent No. 5,580,819). These rejections are respectfully traversed.

A. McCall

1. The McCall Col. 16 Polymers Contain Silicon

Page 3 of the Office Action describes the teachings of McCall by referring to "B monomers". In particular, the Office Action cites Col. 16, lines 35-36 and Col. 16, lines 64 and 54.

However, Col. 16 of McCall describes silicon-containing polymers as specifically stated at Col. 16, line 15. It is respectfully submitted that these silicone-containing polymers would not function as the presently recited by independent Claims 1, 11 and 12 "suds stabilizer". For example, silicon suds suppressors are known. Thus, it is respectfully submitted that McCall neither teaches nor suggests the present invention.

Applicants respectfully submit that even if McCall taught including monomers identical to the claimed invention, McCall does not anticipate the present claims. The

Court of Appeals for the Federal Circuit in E.I. Du Pont De Nemours & Company v. Phillips Petroleum Company, 849 F.2d 1430; 7 USPQ2d 1129 (Fed. Cir. 1988); stated: "On occasion, particularly with polymers, structure alone may be inadequate to define the invention, making it appropriate to define the invention in part by property limitations. " E.I. Du Pont De Nemours & Company v. Phillips Petroleum Company, 849 F2d at 1435; 7 USPQ2d 1129.

The Federal Circuit later stated in E.I. Du Pont De Nemours & Company v. Phillips Petroleum Company, 849 F2d 1430; 7 USPQ2d 1129; "[I]nterpolymers as compositions . . . can be permissibly defined in terms of structure and properties." E.I. Du Pont De Nemours & Company v. Phillips Petroleum Company, 849 F2d at 1436; 7 USPQ2d 1129.

Applicants respectfully submit that the Examiner must consider structure as well as properties of the claimed elements.

Applicants submit that even if picking and choosing monomers from lists in McCall, resulted in including monomers identical to those of the claimed invention, the end product is not.

2. Dependent Claims Further Distinguish over McCall

Claims 10, 12, 15, 16, 17, 18, 22, 23 and 24 further distinguish over McCall by their detailed recitations of specific monomers and/or blocks.

In light of the foregoing, it is respectfully submitted that McCall fails to teach or suggest each and every element of the claims.

B. Li

Li, Col. 2, lines 53-59, teaches "a polymer, i.e., homopolymer, copolymer, terpolymer, etc., having amino, hydroxy and carboxy, hydroxy and amino, amino and carboxy functional group(s). Such polymer may be prepared from monomer(s) having at least one functional group selected from hydroxy, amino and/or carboxy groups".

The Office Action asserts that in Li's invention the amount of the ingredients are varied for the purpose of obtaining coating properties and the applicant's claimed "suds stabilizing properties are also depending on the amount of the ingredients. The Office Action then jumps to the conclusion that it would have been prima facie obvious to select the amount of the ingredients to achieve the desired cationic charge density and suds

stabilizing properties in Li's invention since Li discloses the same chemical formulation of block polymer. This rejection is respectfully traversed.

1. Li Does Not Disclose Block Polymers

The following table lists amounts of ingredients from an example in the present specification.

Present Example 3	Gms	Mol
DMAM	39.31g	0.25 mol
HEA	125g	1.08 mol
AA	5.93g	82.3 mol

Present Example 3 adds one monomer, polymerize it for a number of hours, and then add a different monomer and polymerize it for a number of hours. This results in block polymers.

In contrast, Example 1 of Li shows Charge 2 as having all three monomer ingredients "fed in a continuous manner over a period of 3 hours". This feeding of a mixture of monomers results in a random terpolymer not a block polymer.

2. Li Fails to Select the Present Molecular Weight Range

The amended independent claims recite a molecular weight of about 35K to about 750K daltons. There is no teaching in Li to make this selection.

Li, Col. 5, lines 34-36, discloses a broad number average molecular weight range of 500 to 1,000,000. However, Li's most preferred range is between about 1500 and 25,000 as stated at Col. 5, lines 37-38. Li, Example 1 includes acrylic acid, 2-hydroxyethyl methacrylate, and N, N-dimethylaminoethyl-methacrylate but has a number average molecular weight of 10,862 which is consistent with the Li most preferred range.

3. Dependent Claim 16 Further Distinguishes Over Li:

Dependent Claim 16 specifies monomer ratios not in the Li examples.

Li Example 1 has the following ratios:

	Gms	Mw	Mols	Normalized Mol Ratio
AA	63	72	0.875	0.494
2-HEMA	2318.4	130	17.8	10.1
N,N-DMAM	277.2	157	1.77	1.0

Present Claim 16 recites the molar ratio of monomeric unit A: monomeric unit B: monomeric unit C as 1 to 9: 1 to 9: 1 to 6.

Li Example 1 has ratio of 1 : 11.3 : 0.494 which is outside the range of Claim 16.

In light of the foregoing, it is respectfully submitted that Li fails to teach or suggest each and every element of the claims.

III. Conclusion

In view of the above, it is respectfully submitted that all objections and rejections are overcome. Thus, a Notice of Allowance is respectfully requested.

Respectfully submitted,

Date: Oct 28, 2008 By: _____

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ATTACHMENT I - Marked up Claims

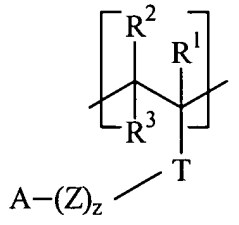
1. (Twice Amended) A block polymer suds stabilizer comprising:

iii) one or more cationic group-containing units; and

iv) [optionally] one or more additional building block units;

provided that the block polymer has an average cationic charge density of about 5 or less units per 100 daltons molecular weight, selected from the group consisting of one or more units having one or more hydroxyl groups, provided that said polymer has a Hydroxyl Group Density of about 0.5 or less, and one or more units having one or more hydrophobe groups selected from the group consisting of non-hydroxyl groups, non-cationic groups, non-anionic groups, non-carbonyl groups, and/or non-H-bonding groups;

wherein said block polymer comprises a cationic unit of the formula:



[I]

wherein each of R^1, R^2 and R^3 are independently selected from the group consisting of hydrogen, C_1 to C_6 alkyl, and mixtures thereof; T is selected from the group consisting of substituted or unsubstituted, saturated or unsaturated, linear or branched radicals selected from the group consisting of alkyl, cycloalkyl, aryl, alkaryl, aralkyl, heterocyclic ring, silyl, nitro, halo, cyano, sulfonato, alkoxy, keto, ester, ether, carbonyl, amido, amino, glycidyl, carbanato, carbamate, carboxylic, and carboalkoxy radicals and mixtures thereof; Z is selected from the group consisting of: $-(CH_2)-$, $(CH_2-CH=CH)-$, $-(CH_2-CHOH)-$, $(CH_2-CHNR^4)-$, $-(CH_2-CHR^5-O)-$ and mixtures thereof; R^4 and R^5 are selected from the group consisting of hydrogen, C_1 to C_6 alkyl and mixtures thereof; z is an integer selected from about 0 to about 12; A is NR^6R^7 or $NR^6R^7R^8$ wherein each of R^6, R^7 and R^8, when present, are independently selected from the group consisting of H, C_1-C_8 linear or branched alkyl, alkyleneoxy having the formula:

—$(R^9O)_yR^{10}$

wherein R^9 is C_2-C_4 linear or branched alkylene, and mixtures thereof; R^{10} is hydrogen, C_1-C_4 alkyl, and mixtures thereof; and y is from 1 to about 10; and

wherein said block polymer has an average molecular weight of from about 35,000 to about 750,000 daltons.

2. (Amended) The block polymer according to Claim 1 wherein said block polymer has an average molecular weight of from about 35,000 to about 500,000 daltons [further comprises:

iii) one or more units having one or more hydroxyl groups, provided that said polymer has a Hydroxyl Group Density of about 0.5 or less].

3. (Amended) The block polymer according to Claim 1 wherein said block polymer has an average molecular weight of from about 35,000 to about 300,000 daltons [further comprises:

iv) one or more units having one or more hydrophobe groups selected from the group consisting of non-hydroxyl groups, non-cationic groups, non-anionic groups, non-carbonyl groups, and/or non-H-bonding groups].

5. (Amended) The block polymer according to Claim 1, wherein said polymer further comprises a member of the group consisting of:

v) units capable of having an anionic charge at a pH of from about 4 to about 12;

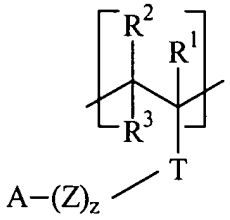
vi) units capable of having an anionic charge and a cationic charge at a pH of from about 4 to about 12;

vii) units having no charge at a pH of from about 4 to about 12; and

viii) mixtures of units (v), (vi), (vii), and (viii).

7. (Amended) The block polymer according to Claim [1] 11, wherein said polymer has an average molecular weight of from about [1,000 to about 2,000,000] 35,000 to about 300,000 daltons.

8. (Amended) The block polymer according to Claim [1] 12, wherein said block polymer has an average molecular weight of from about 35,000 to about 300,000 daltons [comprises a cationic unit of the formula:



[I]

wherein each of R^1, R^2 and R^3 are independently selected from the group consisting of hydrogen, C_1 to C_6 alkyl, and mixtures thereof; T is selected from the group consisting of substituted or unsubstituted, saturated or unsaturated, linear or branched radicals selected from the group consisting of alkyl, cycloalkyl, aryl, alkaryl, aralkyl, heterocyclic ring, silyl, nitro, halo, cyano, sulfonato, alkoxy, keto, ester, ether, carbonyl, amido, amino, glycidyl, carbanato, carbamate, carboxylic, and carboalkoxy radicals and mixtures thereof; Z is selected from the group consisting of: $-(CH_2)-$, $(CH_2-CH=CH)-$, $-(CH_2-CHOH)-$, $(CH_2-CHNR^4)-$, $-(CH_2-CHR^5-O)-$ and mixtures thereof; R^4 and R^5 are selected from the group consisting of hydrogen, C_1 to C_6 alkyl and mixtures thereof; z is an integer selected from about 0 to about 12; A is NR^6R^7 or $NR^6R^7R^8$ wherein each of R^6, R^7 and R^8, when present, are independently selected from the group consisting of H, C_1-C_8 linear or branched alkyl, alkyleneoxy having the formula:

$$—(R^9O)_yR^{10}$$

wherein R^9 is C_2-C_4 linear or branched alkylene, and mixtures thereof; R^{10} is hydrogen, C_1-C_4 alkyl, and mixtures thereof; and y is from 1 to about 10].

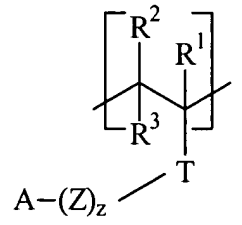
11. (Amended) A block polymer suds stabilizer comprising at least a first homopolymeric unit comprising a series of first cationic monomeric units and at least a second homopolymeric unit comprising a series of second polymeric units,

at least said first monomeric units capable of having a cationic charge at a pH of from about 4 to about 12;

provided that said polymer has an average cationic charge density from about 0.05 to about 5 units per 100 daltons molecular weight at a pH of from about 4 to about 12,

wherein said second polymeric units are selected from the group consisting of one or more units having one or more hydroxyl groups, provided that said polymer has a Hydroxyl Group Density of about 0.5 or less, and one or more units having one or more hydrophobe groups selected from the group consisting of non-hydroxyl groups, non-cationic groups, non-anionic groups, non-carbonyl groups, and/or non-H-bonding groups;

wherein said block polymer comprises a cationic unit of the formula:



[I]

wherein each of R^1, R^2 and R^3 are independently selected from the group consisting of hydrogen, C_1 to C_6 alkyl, and mixtures thereof; T is selected from the group consisting of substituted or unsubstituted, saturated or unsaturated, linear or branched radicals selected from the group consisting of alkyl, cycloalkyl, aryl, alkaryl, aralkyl, heterocyclic ring, silyl, nitro, halo, cyano, sulfonato, alkoxy, keto, ester, ether, carbonyl, amido, amino, glycidyl, carbanato, carbamate, carboxylic, and carboalkoxy radicals and mixtures thereof; Z is selected from the group consisting of: $-(CH_2)-$, $(CH_2-CH=CH)-$, $-(CH_2-CHOH)-$, $(CH_2-CHNR^4)-$, $-(CH_2-CHR^5-O)-$ and mixtures thereof; R^4 and R^5 are selected from the group consisting of hydrogen, C_1 to C_6 alkyl and mixtures thereof; z is an integer selected from about 0 to about 12; A is NR^6R^7 or $NR^6R^7R^8$ wherein each of

R^6, R^7 and R^8, when present, are independently selected from the group consisting of H, C_1-C_8 linear or branched alkyl, alkyleneoxy having the formula:

$$-(R^9O)_yR^{10}$$

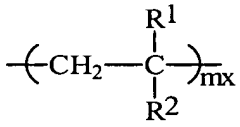
wherein R^9 is C_2-C_4 linear or branched alkylene, and mixtures thereof; R^{10} is hydrogen, C_1-C_4 alkyl, and mixtures thereof; and y is from 1 to about 10; and

wherein said block polymer has an average molecular weight of from about 35,000 to about 750,000 daltons.

12. (Amended) A block polymer suds stabilizer comprising at least one homopolymeric block of monomeric units A and at least one member of the group consisting of a homopolymeric block of monomeric units B and a homopolymeric block of monomeric units C provided that said polymer has an average cationic charge density of at most about 5 units per 100 daltons molecular weight at a pH of from about 4 to about 12; and

wherein said block polymer has an average molecular weight of from about 35,000 to about 750,000 daltons :

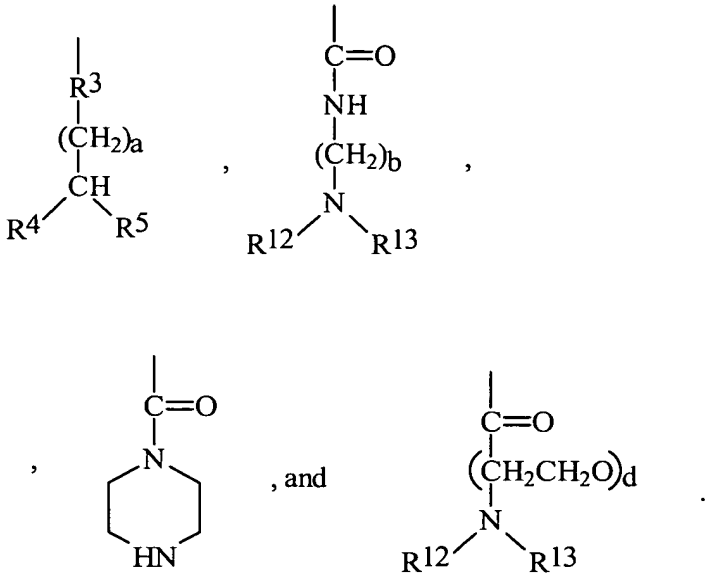
A. said block of cationic monomeric units A having a Formula I:



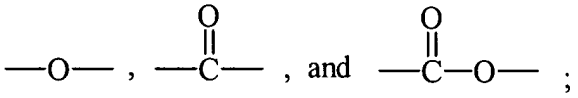
I

wherein R^1 is H or an alkyl having 1 to 10 carbon atoms,

R^2 is a moiety selected from the group consisting of

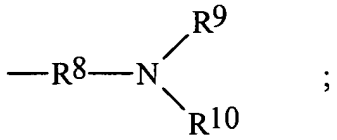


wherein R^3 is selected from the group consisting of



a is an integer from 0 to 16; b is an integer from 2 to 10; c is an integer from 2 to 10; d is an integer from 1 to 100;

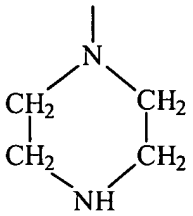
R^4 and R^5 are independently selected from the group consisting of -H, and

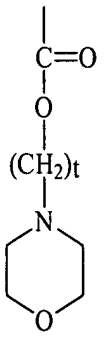


R^8 is independently selected from the group consisting of a bond and an alkylene having 1 to 18 carbon atoms;

R^9 and R^{10} are independently selected from the group consisting of -H, alkyl having 1 to 10 carbon atoms;

R^{12} and R^{13} are independently selected from the group consisting of H and alkyl having from 1 to 10 carbon atoms;

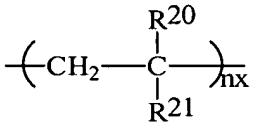




wherein t is an integer from 2 to 10;

B. said monomeric unit B is selected from the group consisting of:

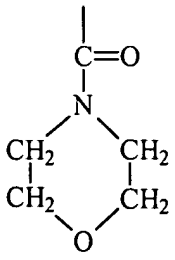
a monomeric unit of Formula IV



IV

wherein R^{20} is selected from the group consisting of H and CH_3;

R^{21} is selected from the group consisting of:



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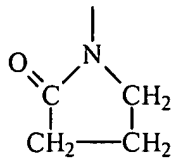
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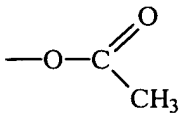
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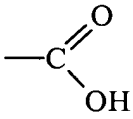
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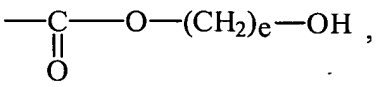
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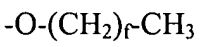
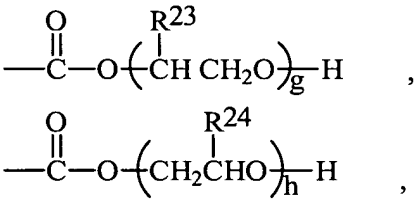
wherein e is an integer from 3 to 25;



wherein f is an integer from 0 to 25;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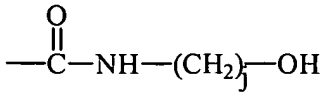
wherein g is an integer from 1 to 100,

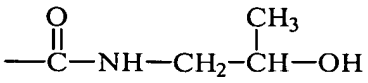
h is an integer from 1 to 100,

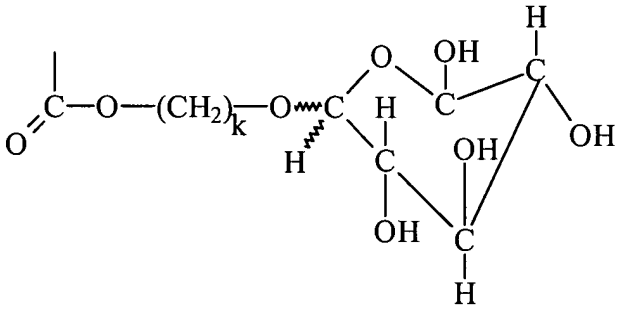
R^{23} is -H, $-CH_3$ or $-C_2H_5$,

R^{24} is $-CH_3$ or $-C_2H_5$;

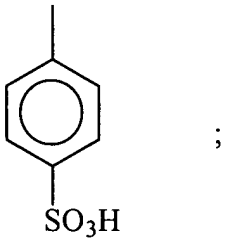


wherein j is an integer from 1 to 25;



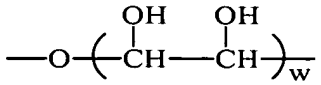


wherein k is an integer from 1 to 25;



$-NH-(CH_2)_r-NH_2 \cdot HCl$, wherein r is an integer from 1 to 25; and

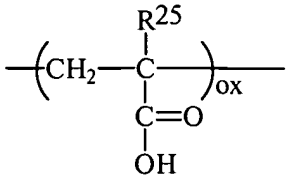
a polyhydroxy monomeric unit of Formula VI:



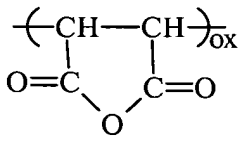
VI

wherein w is an integer from 1 to 50; and

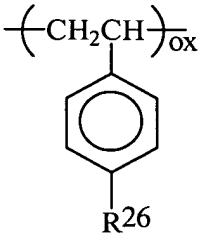
C. monomeric unit C is selected from the group consisting of:



wherein R^{25} is -H or $-CH_3$,



and



wherein R^{26} is -H or CH_3, and

x represents the total number of monomeric units within the block polymer; m, n, o, when present, represent the mole ratio of their respective monomeric units in a given block polymer, wherein at least two different monomeric units are present in the block polymer.